

GALAPAGOS ENVIRONMENTAL MANAGEMENT PROGRAM

(EC-0134)

EXECUTIVE SUMMARY

Borrower and guarantor:	Republic of Ecuador	
Executing agency:	The Ministry of the Environment, through the Dirección del Parque Nacional Galápagos (DPNG) [Galapagos National Park Directorate] and with the participation of the Charles Darwin Foundation, the Servicio Ecuatoriano de Sanidad Agropecuaria (SESA) [Ecuadorian Agricultural Health Service] and the Municipalities of Puerto Ayora, Puerto Baquerizo Moreno and Puerto Villamil.	
Amount and source:	IDB (OC/IFF):	US\$10.4 million
	Local:	<u>US\$ 2.6 million</u>
	Total:	US\$13.0 million
Terms and conditions:	Amortization period:	25 years
	Grace period:	4 years
	Disbursement period:	4 years
	Interest rate:	variable
	Inspection and supervision:	1%
	Credit fee:	0.75% per annum on the undisbursed balance
	Currency:	U.S. dollars from the Single Currency Facility
Background:	The Galapagos Archipelago lies 1,000 km off Ecuador's coast and is composed of 15 islands and 115 islets which together cover 7,882 km ² of land and a marine area of 140,000 km ² . These islands contain some of the most outstanding marine and land ecosystems in the world. Their considerable distance from the mainland has allowed unique ecological conditions to evolve that are extremely favorable for the development of a number of exclusively native species.	

The marine and land ecosystems are threatened by economic activities closely related to an influx of people from the mainland, particularly tourists and fishermen. Tourism is the main economic activity in the archipelago, employing close to 40% of the economically active population and earning about US\$100 million a year for the Ecuadorian economy. This activity has not been exempt from conflict. While some tour operators consider that restrictions on investments in tourism infrastructure on the islands have narrowed their development prospects, the scientific community and conservationists have viewed with concern the impact of tourism, which brings increasing numbers of people from the mainland, placing additional pressures on the island ecosystems.

The fishing industry has burgeoned since the 1980s, thanks to the rise of fisheries (not always legal) for species with high commercial value, a development which has prompted a transition from a subsistence fishery to a commercial fishery that sells on markets in continental Ecuador and abroad. The environmental and social impacts of this activity include heavy pressure on certain stocks such as lobster and sea cucumber, a reduction in biodiversity owing to by-catch and the persistence of conflicts in relatively small communities.

The influx of people into the archipelago as a result of tourism and fishing has also affected the unique and fragile balance of the different island ecosystems, through the introduction of exotic species.¹ The consensus is that the main threat to native biodiversity comes from the exotic species introduced into the archipelago.

As for the socioeconomic situation, explosive population growth in the Galapagos (the highest in the country at 6.7% a year) has aggravated shortcomings in urban and provincial planning. Demand for basic services cannot be adequately met by the agencies responsible for building environmental sanitation infrastructure and providing other public services. The most critical areas are potable water, sewerage and solid waste management.

¹ These species are considered exotic since they do not form part of the archipelago's original biodiversity. They include goats, donkeys, pigs, rats, and plant species introduced by humans from the mainland. A large part of the native biodiversity of the Galapagos is endemic, in that most of it cannot be found anywhere else in the world.

To address these problems, the country as a whole has developed policies and strategies to promote the conservation of the archipelago's unique ecosystems and the sustainable use of its natural resources. In 1998, the Ecuadorian government promulgated a Law establishing the Special Regime for the Conservation and Sustainable Development of Galapagos Province, which places restrictions on immigration and the use of its ecosystems. The law declared the archipelago's marine zone to be a protected area and gave it the status of a marine reserve. As a result, fishing was restricted to just certain zones in the Galapagos Marine Reserve (RMG) and was limited exclusively to in-shore fishermen. The Ministry of the Environment is responsible for administering the RMG through the Galapagos National Park Directorate (which also administers the land area of Galapagos National Park covering 97% of the islands). Policy decisions on management of the RMG are the responsibility of the Autoridad Interinstitucional de Manejo de la Reserva (AIM) [Inter-Agency Reserve Management Authority], which is chaired by the Ministry of the Environment. Policy decisions take into account the recommendations of the Junta de Manejo Participativo de la Reserva (JMP) [Participative Reserve Management Board], a body composed of legally-organized groups of users of the RMG, including representatives of the fisheries and tourism sectors, the scientific community and the Galapagos National Park Directorate.

Despite this progress and given the magnitude and complexity of the tasks that must be undertaken for effective management of the resources and ecosystems in the RMG, a series of obstacles that interfere with protection of marine and coastal biodiversity need to be addressed and sustainable use of its resources promoted. In particular, embryonic institutional development for managing the RMG, insufficient coverage to halt illegal fishing and serious shortcomings in emergency surveillance and response systems have been identified. Capacity for settling disputes arising from competition for shared resources is weak and there are major limitations on the development and generation of scientific information for managing RMG resources and ecosystems.

The prospects for undertaking a successful program for management of the Galapagos Marine Reserve are particularly bright at present. Passage of the Law establishing the Special Regime for the Galapagos, significant progress in participative management of the reserve, and a strengthened regional structure for conservation and sustainable development of the archipelago are some of the features of the new scenario. This progress is an essential part of building a new environmental management model that will promote shared responsibility for making and implementing decisions on the use of natural resources, providing basic services that will be financially sustainable, and contributing to the decentralization process under way in the country.

Objectives:

The general objective of the program is to reverse the process of environmental degradation in the Galapagos Islands. The specific objectives are: (i) to support effective implementation of the management plan for the RMG in order to help conserve the marine and coastal ecosystems and allow for the sustainable use of their resources; (ii) to complement efforts to reduce the introduction and spread of exotic species, pests and diseases that threaten the archipelago's native biodiversity; (iii) to strengthen coordination capacity and develop the environmental management mechanisms of the DPNG, the Participative Reserve Management Board, the Inter-Agency Reserve Management Authority and Galapagos municipalities; and (iv) to lay the groundwork that will enable the Galapagos municipalities to gain access to financing for environmentally-friendly potable water, sewerage and solid waste management services.

Description:

The program will cost an estimated US\$13 million, with the Bank financing the equivalent of US\$10.4 million. Four subprograms are proposed: (1) support for management of the Marine Reserve; (2) inspection and quarantine; (3) institutional coordination and management; and (4) basic sanitation studies and emergency works.

1. Marine reserve management (US\$6 million)

This subprogram seeks to set the RMG management plan in motion in order to implement and maintain over time a series of integrated activities that contribute to the sustainable use of natural resources and conservation of the marine coastal environment within the RMG. The following components are planned:

a. Natural resource management (US\$1.4 million)

The program will support DPNG in establishing a unit for marine zoning, finance short-term consulting services on zoning methods

used in other protected marine areas, and boost capacity for reaching and complying with agreements on managing RMG resources.

b. Maritime security and control (US\$3.2 million)

An integrated maritime security and control system will be established for early detection of and rapid response to emergencies at sea and violations of the rules governing the use of resources and other regulations. To establish the system, the program will finance the procurement and installation of a portable radar station and three fixed stations, satellite positioning equipment to detect ships operating in the reserve and four command and control posts equipped with the minimum facilities needed to house and operate the network. The Galapagos National Park Directorate marine surveillance capacity will be improved through the purchase of four speedboats (for coastal patrols) and an ocean-going boat, complementary field equipment and storage facilities, and a decompression chamber will be built.

c. Environmental education, communications and training (US\$500,000)

The program will support activities to heighten public awareness, and to improve formal and informal education, inter- and intra-sector communications and the organizational development of user groups. It will also create capacity in the DPNG. Fishing cooperatives, shipbuilders' associations and tourism operators, women's and youth groups and other grass-roots organizations will receive technical assistance in building a shared vision of a community that is responsible for managing its fisheries resources.

d. Research and monitoring (US\$900,000)

The program will support three types of research and monitoring activities that will: (i) create capacity in the DPNG to carry out the tasks of planning, coordinating and supervising research activities; (ii) conduct priority research that is consistent with the management plan for the RMG, including establishment of a baseline for marine biodiversity, evaluation of commercial fish stocks, analysis of the impact of by-catch and an evaluation of the condition of visitor sites at the marine reserve; and (iii) design and establish a cost-efficient program for monitoring biological, social and economic indicators, including diagnostic studies and alternatives for controlling migration to the islands by applying the Special Regime Law.

2. Inspection and quarantine (US\$1.8 million)

Inspection and quarantine control will be supported to prevent the entry and spread of exotic species, pests and diseases from one island to another. Small works will be constructed or adapted at airports and ports on the islands of Baltra, Santa Cruz, Isabela, San Cristóbal and Floreana.

The main buildings at the airports on Baltra and San Cristóbal will be upgraded and a building that will serve as the base of operations of the Galapagos inspection and quarantine system will be built at Puerto Ayora. Inspection rooms and municipal offices will be built at the municipal docks on the three islands.

3. Institutional coordination and management (US\$700,000)

The coordination capacity of the institutions involved in the management and protection of the Galapagos islands will be strengthened and management mechanisms will be developed in them. The Ministry of Environment's Galapagos Islands Coordination Unit (UCIGAL) will be strengthened, as will Instituto Nacional de Galápagos [Galapagos National Authority]. Capacity will be built up in the Galapagos National Park Directorate to manage the protected marine area and in the Participative Reserve Management Board to optimize its process of consultation and agreement and joint decision making. The municipalities' capacity to deliver basic services² will be developed in order to create conditions that would allow municipalities to have access to other sources of financing such as the IDB and other donors.

4. Environmental sanitation studies and emergency works (US\$1 million)

Feasibility studies and engineering designs will be prepared for the rehabilitation and upgrading of potable water, sewerage and wastewater disposal systems in the towns of Puerto Baquerizo and Puerto Villamil. The emergency works would be carried out in three municipalities and include repair of distribution tanks and chlorination systems, the main supply pipes and pumping stations.

² At present, the Bank is supporting institution-building activities for those municipalities. The activities include: (i) support for the preparation of strategic plans; (ii) provision of planning tools and basic equipment (preinvestment loan 919/SF-EC); and (iii) preliminary support for boosting the capacity to manage basic services and obtain loans (TC-00-06-02-5 EC).

Programs for the reduction, reuse and recycling of solid waste from ships and tourism operations will be financed and a program will be established to reship recyclable waste such as cardboard, glass, metal, oil and plastics to the mainland.

**The Bank's
country and
sector strategy:**

The Bank's strategy in Ecuador has four objectives: (i) to halt and reverse economic deterioration; (ii) to lay the groundwork for sustained growth; (iii) to alleviate poverty permanently and improve income distribution; and (iv) to promote the efficient use of natural resources and environmental protection. The present project corresponds to objective (iv) and is closely related to objectives (ii) and (iii).

The proposed program supports the strategy by: (i) promoting the conservation of marine and coastal ecosystems in the Galapagos, preserving biodiversity on land and generating environmental benefits by reducing pollution of island aquifers; (ii) contributing to the institutional development of local governments on the islands; and (iii) preserving an important source of income for the local and national economies by supporting the sustainable use of marine and coastal resources and improving the pool and quality of human capital in the archipelago.

**Environmental
and social
review:**

Profile II and the ESIB were approved by CESI/TRG on 31 October 1997, and the project report was approved on 22 September 2000. Since the components are intended to reverse or control environmental degradation in the archipelago, the overall environmental impact of the project will be favorable. The subprogram for management of the RMG will generate important environmental benefits through better protection of habitats and marine and coastal species. The combined effects of the zoning plan, full registration of fisheries with restricted access, and the participative management and control mechanisms will help the fish stocks to recover, reduce by-catch and ease pressure on fragile ecosystems such as coral reefs, shoals and mangrove swamps. The inspection and quarantine subprogram will also have environmental benefits in terms of protecting land, coastal and marine biodiversity of global importance since it is so highly endogenous. Preparation of studies for the delivery of environmental sanitation services (solid waste management, water supply and sewer systems and wastewater treatment) will help to create positive environmental impacts when the works are in operation.

Benefits:

The program will create social benefits through more effective participation by RMG user groups in decision making and by easing inter-sector conflicts (particularly between in-shore fishermen and tourism operators). The environmental education activities, which will

strengthen the islanders' cultural identity and social fabric, will also bring social benefits. The environmental sanitation component will create substantial social benefits in terms of better public health.

The program will also generate economic benefits linked to improving and maintaining the condition of the resources on which the Galapagos economy is based. Suitable protection for the marine and coastal ecosystems will permit the tourism industry to continue offering attractions for visitors to the archipelago, who would be willing to pay higher fees to visit the RMG if its management and protection were assured. Establishment of the reserve will also increase the income of in-shore fishermen in the long run as key fish stocks recover. Other benefits include creating conditions conducive to improving the delivery of basic sanitation services and generating technical capacity and financial resources to fund construction of future infrastructure works.

Risks:

Risk: The interests of certain users of the Galapagos Marine Reserve may lead them to resist the change to a participative management system that places greater emphasis on resource conservation rather than free exploitation. **Attenuating factors:** Support is being provided for fuller participation by in-shore fishermen in decisions affecting the reserve and support will be provided for alternative economic activities to the fishery.

Risk: The host of cooperation and financing initiatives to protect Galapagos ecosystems and promote the sustainable use of its natural resources creates the risk that efforts and resources might overlap and make it difficult to achieve complementarity and synergies among the different initiatives. **Attenuating factors:** As part of the program's institutional strategy, a permanent unit (UCIGAL) is being consolidated within the Ministry of the Environment and will take charge of coordinating the different actions to benefit the archipelago.

Special contractual clauses:

1. Special conditions precedent to the first disbursement

- a. Creation of the program administrative and financial management unit (UGAFIP) and appointment of the unit's chief (paragraph 3.2).
- b. Hiring of a specialized agency to assist with contracting and procurement (paragraph 3.2).
- c. Signature of the following agreements: (i) co-execution agreement between the Galapagos National Park Directorate and the Charles Darwin Foundation (paragraph 3.9); and (ii) framework agreement between the Galapagos National Park

Directorate and the Ecuadorian Agricultural Health Service to operate and maintain the Galapagos inspection and quarantine system (paragraph 3.10).

- d. Establishment of an office of the Ecuadorian Agricultural Health Service in the Galapagos (paragraph 3.10).

2. Condition precedent to the disbursement of funds for strengthening the municipalities and performing emergency sanitation works

- a. Signature of agreements with each municipality for execution of the activities envisaged under this component (paragraph 3.14).

3. Conditions during execution

- a. Annual program follow-up and monitoring meetings (paragraphs 3.31 and 3.32).
- b. Within the first 90 days of each financial year, evidence is to be presented to the Bank that the local contribution has been budgeted and funds have been set aside solely for the purpose of financing it. The Bank's nonobjection will also be required for new investments totaling more than US\$500,000 annually, financed from the revenue from the entrance fees paid by visitors to the Galapagos National Park.

Poverty-targeting and social sector classification:

This operation does not qualify as a social equity-enhancing project, as described in the indicative targets mandated by the Bank's Eighth Replenishment.

Exceptions to Bank policy:

None

Procurement:

Goods and services will be procured and works will be contracted in accordance with Bank procedures. International competitive bidding will be compulsory for procurements of goods and services costing more than US\$250,000 and for construction contracts over US\$2 million. Consulting services will be contracted in accordance with Bank procedures.